

WHAT IS CLAIMED IS:

1. A locking component disposed for traveling along a guide wire which includes a flexible body member, the locking component comprising:

a body member including means for temporarily compressing at least a portion of the flexible body member of the guide wire to allow the compressed portion of the flexible body member to be placed in a recess formed in the body member, the compressed portion of the flexible body member being adapted to decompress within the recess to lock the formerly compressed portion of the flexible body member within the recess.

2. The locking component of claim 1, wherein the means for temporarily compressing the flexible body member of the guide wire is a longitudinal opening extending into the body member which is adapted to receive and temporarily compress at least a portion of the flexible body member.

3. The locking component of claim 2, wherein the longitudinal opening extending into the body member is proximally tapered from one diameter to a smaller diameter.

4. The locking component of claim 3, wherein the recess formed in the locking device is adjacent to the smaller diameter of the longitudinal opening and in communication with the longitudinal opening.

5. The locking component of claim 4, wherein the flexible body member of the guide wire is a helical coil disposed on the guide wire and the smallest diameter of the tapered, longitudinal opening is smaller than the diameter of the helical coil.

6. The locking component of claim 5, wherein the helical coil disposed on the guide wire is at the distal end of the guide wire.

7. The locking component of claim 6, wherein the flexible member disposed on the guide wire provides shock absorbing capabilities to at least partially absorb unwanted shock that may be transmitted along the guide wire to the filter assembly.

8. The locking component of claim 1, wherein the locking component is adapted to be attached to a medical device which is deliverable over the guide wire.

9. The locking component of claim 6, wherein the flexible member disposed on the guide wire provides shock absorbing capabilities to at least partially absorb unwanted shock that may be transmitted along the guide wire to the filter assembly.

10. The locking component of claim 1, wherein the flexible member disposed on the guide wire is a coil spring.

11. An embolic protection device to be delivered separately and to be attached to a guide wire which includes a flexible body member, the embolic protection device comprising:

a filter assembly having a proximal end and a distal end; and

a guide wire locking component attached to one of the ends of the filter assembly, the guide wire locking component including means for temporarily compressing at least a portion of the flexible body member of the guide wire to allow the compressed portion of the flexible body member to be placed in a recess formed in the guide wire locking component, the compressed portion of the flexible body member being adapted to decompress within the recess to lock the formerly compressed portion of the flexible body member within the recess.

12. The embolic protection device of claim 11, wherein the guide wire locking component defines a body member and the means for temporarily compressing the flexible body member of the guide wire is a longitudinal opening extending into the body member which is adapted to receive and temporarily compress at least a portion of the flexible body member.

13. The embolic protection device of claim 12, wherein the longitudinal opening extending into the body member is proximally tapered from one diameter to a smaller diameter.

14. The embolic protection device of claim 13, wherein the recess formed in the locking device is adjacent to the smaller diameter of the longitudinal opening and the recess is in communication with the longitudinal opening.

15. The embolic protection device of claim 14, wherein the flexible body member of the guide wire is a helical coil disposed on the guide wire and the smallest diameter of the tapered, longitudinal opening is smaller than the diameter of the helical coil.

16. The embolic protection device of claim 15, wherein the helical coil disposed on the guide wire is at the distal end of the guide wire.

17. The embolic protection device of claim 11, wherein the flexible member disposed on the guide wire provides shock absorbing capabilities to at least partially absorb unwanted shock that may be transmitted along the guide wire to the filter assembly.

18. The embolic protection device of claim 11, wherein the flexible member disposed on the guide wire is a coil spring.

19. An apparatus for embolic protection, comprising:
  - a guide wire having a flexible body member attached thereto;
  - a filter assembly disposed for traveling along the guide wire, the filter assembly including a first end and a second end; and
    - a guide wire locking component disposed on one of the ends of the filter assembly, the guide wire locking component including a longitudinal opening extending into the body member which is adapted to receive and temporarily compress at least a portion of the flexible body member to allow the compressed portion of the flexible body member to be placed in a recess formed in the guide wire locking component, the compressed portion of the flexible body member being adapted to decompress within the recess to lock the formerly compressed portion of the flexible body member within the recess.
20. The apparatus of claim 19, wherein the longitudinal opening extending into the locking component is tapered from one diameter to a smaller diameter.
21. The apparatus of claim 20, wherein the recess formed in the locking device is adjacent to the smaller diameter of the longitudinal opening and the recess is in communication with the longitudinal opening.
22. The apparatus of claim 19, wherein the flexible body member is rotatable attached to the guide wire.
23. The apparatus of claim 19, wherein the flexible body member is a helical coil disposed at the distal end of the guide wire.
24. The apparatus of claim 19, wherein the flexible body member is a helical coil.

25. The apparatus of claim 24, wherein the helical coil include a tapered proximal end.

26. The apparatus of claim 25, wherein the tapered proximal end of the helical coil is stretched to form gaps between adjacent coils.

27. The apparatus of claim 19, further including a delivery sheath enclosing the filter assembly and used to advance the filter assembly along the guide wire.

28. An apparatus for embolic protection, comprising:  
a guide wire having a flexible body member rotatable mounted on the guide wire;  
a filter assembly including a proximal end and a distal end; and  
a guide wire locking component attached to one of the ends of the filter assembly, the guide wire locking component including means for temporarily compressing at least a portion of the flexible body member of the guide wire to allow the compressed portion of the flexible body member to be placed in a recess formed in the guide wire locking component, the compressed portion of the flexible body member being adapted to decompress within the recess to lock the formerly compressed portion of the flexible body member within the recess while allowing the filter assembly to be rotatable relative to the guide wire.

29. The apparatus of claim 28, wherein the rotating flexible body member is disposed between a pair of stop fittings.

30. The apparatus of claim 29, wherein the guide wire includes a proximal coil section and a distal coil section and the rotating flexible body member is disposed between the proximal coil section and the distal coil section.

31. The locking component of claim 1, wherein the means for temporarily compressing the flexible body member of the guide wire is a tubular member having a longitudinal opening adapted to receive and temporarily compress at least a portion of the flexible body member.

32. The locking component of claim 31, wherein the longitudinal opening of the tubular member is proximally tapered from one diameter to a smaller diameter.

33. The locking component of claim 32, wherein the recess formed in the locking device is adjacent to the smaller diameter of the longitudinal opening and in communication with the longitudinal opening.

34. The locking component of claim 4, further including a ring member disposed in the recess adjacent to the smaller diameter of the longitudinal opening.

35. The locking component of claim 34, wherein the ring member is made from a metallic material.

36. The locking component of claim 31, wherein the tubular member includes a flange at one end which is disposed in the recess formed in the body member.

37. The locking component of claim 31, wherein the ring member is made from a metallic material.